Virginia Wildlife

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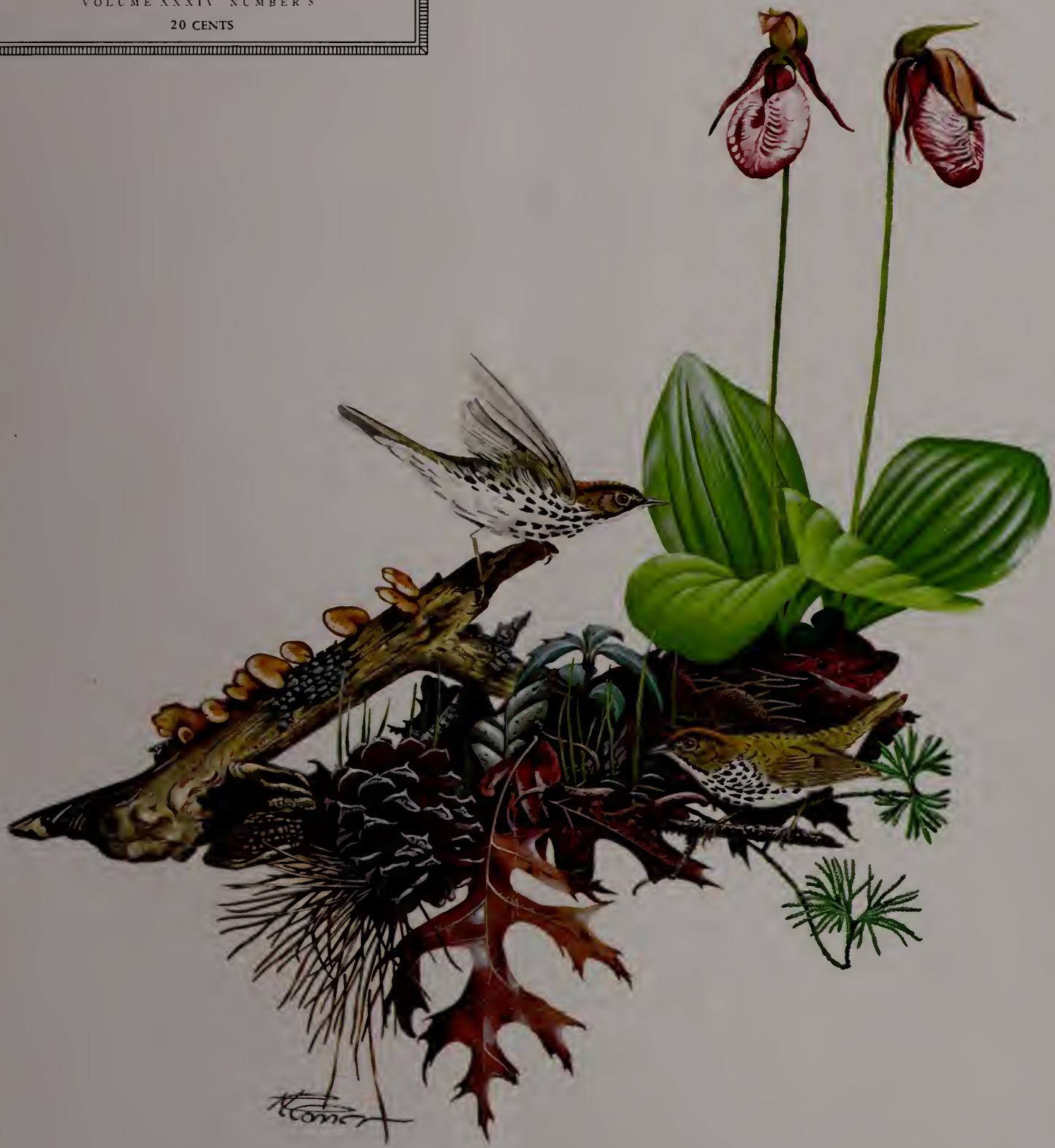

Virginia Wildlife

Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

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MAY

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COVER: Ovenbirds, with pink lady's-slipper, by Ralph L. Conner, Richmond.

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EDITORIAL

How to Rig a Debate

THE student who wrote the letter which appears in the column to the right had a tough assignment. Like most public "debates" on hunting, this one was rigged at the outset by the very terms in which the issue was stated, and *not* in favor of the student who had to defend hunting (which should need no defense anyway, as a matter of fact).

To set "self-limiting, intrinsic, density dependent mechanisms of population control" against "external, independent control mechanisms into which category the hunter is placed" is to base the whole issue on several false premises.

In the first place, there is the assumption that intrinsic, density dependent mechanisms of population control are, in fact, self-limiting when actually they usually are not. A rabies epidemic in a high density fox population is a typical intrinsic, density dependent mechanism that certainly will decimate the affected population, but its self-limiting feature is highly questionable. These so-called intrinsic, density dependent mechanisms tend very strongly to produce population booms and busts—anything but a stable population in constant balance either with its habitat or with the control mechanism.

Secondly, there is the assumption that the hunter is an "external" factor "independent" of the population density of the hunted. Nothing could be less accurate. Hunting is no more external to the hunted population than is any other kind of predation, and it has the same biological effect on the population of the hunted as any other kind of predation. Furthermore, hunting in most cases is one of the *most* "self-limiting" and "density dependent" mechanisms of population control, for two reasons: (1) the law of diminishing returns affects the human sport hunter long before it puts a stop to wild predators' activities, which usually diminish only as the predators themselves starve; and (2) scientifically managed sport hunting, which is what we are dealing with in North America today, brings itself to a sudden and dramatic halt by *self-imposed law* when the carefully calculated annual surplus of game species has been taken. Thus, hunting is the *only* density dependent mechanism at work on wildlife populations which can be shown to have any rational basis of self-limitation—the only one which does not function blindly, irrationally, and without intelligent control.

Still further, the terms of this debate rule out the main justification of sport hunting as an ecologically legitimate human activity. Sport hunting need not have to be shown to be positively helpful to the hunted species in each case, any more than timber harvesting has to be shown to be good for trees, in order to be acceptable. Good forestry *is* good for the trees; and good wildlife management *is* good for the species concerned. But trees and wildlife are resources that we can cultivate, use and enjoy, or leave alone and just watch, and both cutting timber and hunting are merely exercising an option to put a renewable natural resource to its highest and best use from the human point of view, not necessarily from the point of view of the oak or the whitetail deer. In order to be ecologically legitimate, sport hunting does not have to be proved to be an ecological necessity. Few human activities are. The rest of the world could get along amazingly well without any of the things we do. In order to be accepted as an ecologically legitimate activity for those who wish to participate in it, regulated sport hunting need only to show that it does not endanger the well being of the species hunted.

Now, does anybody want to debate the merits of regulated sport hunting starting from *that* premise?—J.F.Mc.

LETTERS

Debate on Hunting

I am a junior in college and am engaged in an ecology-oriented program. As an assignment, I have been given two weeks to gather pertinent information supporting hunting and must debate this popular issue. The theme of our debate centers upon the merits of self-limiting, intrinsic, density dependent mechanisms of population control, versus those of external, independent control mechanisms into which category the hunter is placed. Therefore I am requesting any available information to support my view that the sportsman is not a murderer of wildlife, and any material you can send me upholding hunting as a sport.

(Name Withheld)

Our comments appear in the column to the left.—Ed.

Reports on Bird Bands

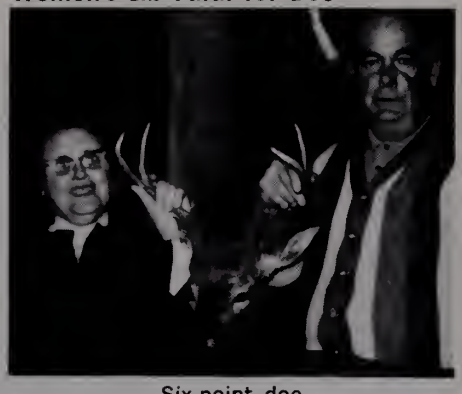
About ten days ago a grosbeak flew into our picture window. When I went out and picked him up, I noticed a band on his leg with the numbers 77 over 112886. Since we have dogs and cats running loose in our community, I brought him into the house until he seemed to be over the shock and could fly. The next day we noticed a grosbeak with a band feeding on the ground, and I am sure it was the same one. We have seen him several times since, and he seems to be flying normally. Although the other grosbeaks have left, this one and a female are still here.

I would like to know where and when this bird was banded. Any information you can give me will be appreciated.

Maria G. Dunn
Toano

Information on bird band recoveries should be sent to the Migratory Bird Population Station, U. S. Fish and Wildlife Service, Laurel, Maryland 20810. The Station will reciprocate by informing the sender where and when the bird was banded.—Ed.

Women's Lib Fatal for Doe



Six-point doe.

I am enclosing a picture of my wife and myself with a rare, six-point antlered doe I killed on opening day of the deer season last year. It is the first such doe ever recorded by the Cobham Hunt Club, of which I am a member. *R. L. Proffitt*

A doe that insists on looking like a buck is likely to be treated as one.—Ed.

ALEWIVES + ELECTRONICS = CLAYTOR LAKE WHITE BASS

By BILL COCHRAN
Roanoke

Bob Cromer studies face of his locator, searching for alewives and white bass.

HUNKERED down into the face of his electronic depth sounder-fish locator, Bob Cromer eased his boat over a sunken sandbar in Claytor Lake below the state park. He had been in the area little more than one minute when flashes of red light recorded on the black dial of the locator just below the zero mark.

"Alewives! Just under the surface," he shouted.

Then more flashes of red suddenly lighted up the dial just above the 17-foot bottom mark.

"There they are! White bass!" exclaimed Bob.

Often there is considerable skepticism in the mind of Bob's fishing partner at this point, but it is short-lived. Bob, a Roanoke insurance man, quickly tossed out a small Styrofoam buoy with a string and sinker attached to mark the school of white bass. Then he eased the boat to approximately 25 yards away and lowered the anchor.

Whipping his spinning rod, he sent a silver Kastmaster spoon, which caught the glint of the sun, to a point beyond the marker buoy. There he let it sink. When slack in his line indicated that it had reached the bottom, he began a retrieve, flashing the offering across the bottom with fast sweeps of his rod tip.

BANG!

A deep-bodied white bass socked the lure with his hard mouth and bowed Bob's rod like a rainbow. The fish came aboard reluctantly, shimmering and silvery, a trophy carrying considerable weight for its 15 inches of length.

The rest of the day was the same. It simply was a matter of cruising around, finding schools on the locator, then catching them until they spooked or moved on. Bob and his partner landed about 30 spunky white bass, and probably had that many more strikes. Even at that, he called it a slow day.

The next day, late May, 1972, Dillard Grubb of Roanoke was fishing Claytor the same way. "It was the best day I ever had in my life," he reported afterwards.

Hefty white bass bows Bob's rod like a rainbow.

Dillard instructed his non-fishing wife on how to use the locator while he concentrated on catching fish. "There's no telling how many we caught," he said. "I did actually boat and measure 29. Six were 12 to 13 inches, five were 13 to 14 inches, seven were 14 to 15 inches, seven were 15 to 16 inches, three were 16 to 17 inches, and one was 17¼ inches." These are jumbo white bass in any part of the country.

Dillard reported the fishing to be so fantastic throughout the entire day that he shook many fish off the hook of his lure without bothering to land them after hooking and playing them.

"It was the only time in my entire life I can honestly say that my shoulder was tired from catching so many fish," said the avid, middle-aged angler. "They were tying knots in the tip of my rod."

Dillard is quick to add that Bob has been his instructor on how to use a locator to catch white bass at Claytor. "If it wasn't for him, I'd still be fishing for them at night," he smiles.

Dillard has been an avid white bass angler for several years at Claytor. Like most fishermen, he once took nearly all of his catches bait fishing under lanterns after dark. Then along came alewives, fish locators, and guys like Bob to prefect a new fishing technique.

First, let's look at the alewives. These slim, silver-sided, shad-like fish with a large eye set high in their small head were established in Claytor as a food fish for game fish in the late 1960s. In recent years, they have provided a rich and abundant source of food for white bass. Studies show that the alewives resulted in white bass, and several other species, increasing their weight and size. Traditionally, Claytor Lake has offered limited food supplies for game fish. The alewives have been much like setting thick steaks and heaping portions of mashed potatoes before an undernourished man.

The white bass, with their enormous intake of food, consistently shadow schools of alewives. Then, whenever they are hungry, which is often, they go chopping through these baitfish in ruthless attacks.

This is where the electronic depth finder-fish locator comes into action. Such devices, which rapidly have become popular with anglers in recent years, are ideal for finding schools of alewives and white bass. They send a high-frequency sound wave through the water which is bounced back and converted to a dial that gives the depth of the water and pinpoints obstructions, including fish, suspended from the boat to the bottom.

"For white bass, I'd rather be without my rod than without my locator," says Bob. Some of his friends jest that he spends more time peering into the face of his locator than a soap opera hooked housewife does watching afternoon TV. "You've got to believe in this locator," Bob assures.

Unlike most largemouth and smallmouth bass, white bass roam about in large, densely packed schools. In May, the best time for this electronics fishing, they can be found over sandbars and off points, with a popular region for them being from above the Claytor Lake State Park down to just upstream from the dam. A second popular spot is well up Peak Creek, a deep, green, winding tributary of the impoundment.

Often during the daytime, the white bass will be suspended in water 25 feet deep and more. They can be tough to take at times. Then towards evening, they normally begin moving into shallower water, herding schools of alewives toward the bank. Those times when they move into water three to five feet deep, you can

Welcome aboard!

 (Continued from page 5)

hook a hefty fish on almost every cast. The superb fighting ability of the white bass sees to it that you don't land them all, however.

"Pound for pound, ounce for ounce, fin for fin there is nothing like them," exclaims Bob.

At South Holston Reservoir, white bass have similar roaming habits. However, there wolf-like packs of whites expertly herd young-of-the-year shad to the surface where they charge into them so ravenously that the water boils and froths with the action. This creates superb jump fishing. Anglers watch for such surface disturbance, and when they spot it they gun their outboards and roar off to the action flinging a spoon or spinner into the foraging fish.

The Claytor white bass splash the surface seldom, thus the keen eye of a locator must be employed to follow their movements. Bob has learned to read his locator with impressive skill. He cruises about in his boat watching the readings on the dial. A brief bump of red on the whirling dial may go unnoticed to the untrained eye, but to Bob it can spell fish. His normal procedure is to search for alewives in proven sections of the lake. They usually are within five feet of the surface. "Find the alewives and you'll find the white bass," he advises.

Left: Author's son, proud of white bass caught by his dad. Right: Charles Akers landed this citation white bass in Peak Creek.

The white bass will be lying in schools just below the alewives. Thus, a typical reading on the locator may show a band of red at the three-foot mark, which indicates alewives, another band at the 15-foot mark, which pinpoints white bass, and a third band at the 17-foot mark indicating a sandbar.

Such a spot quickly is marked by Bob with a small Styrofoam buoy. Then the area quietly is worked with silver spoons, such as Kastmasters, Sidewinders and Mr. Champs. Bucktail jigs and Little Georges also are productive at times.

Bob always is quick to remind a newcomer that the key to catching Claytor Lake white bass is the skillful use of a locator. Regardless of how good a lure might be there really is little need to cast it until you locate the fish.

Bob's normal retrieve is fairly fast as he moves the lure along with wide, horizontal sweeps of his rod. If the lure fails to bring a strike after several tries, he will retrieve the marker, crank up the motor and once again go scanning for schools of fish. The white bass move often, and sometimes rapidly. It pays to try to keep up with them.

The last hour before dark can put more fish in a boat than the entire rest of the day, if the fisherman will remember that the white bass then often move into shallow-water areas where they feed actively and it is not difficult to get a lure to them.

While May has proven to be the best month for electronic white bass fishing at Claytor, another peak occurs in November and December, although the past winter for some reason was a poor one. Bob and Dillard have had little success taking white bass with their method during the summer. Dillard kept records in 1971 that showed from June 1 through Labor Day he made 43 trips to Claytor, a total drive of 4,000 miles, and landed but one white bass. He caught plenty of fish on both sides of these dates, but they might as well have had lockjaw during the summer. At this time other fishermen were having success taking white bass after dark, but the electronic method was not working.

As can be seen, this fishing can be feast or famine sport, but Bob believes mid-summer success is just a matter of figuring the fish out, a challenge yet to be realized. "If I have to fish after dark, I'll go without catching them," he said.

Meanwhile in May, the locator has been working as well to find white bass as a good bird dog does to locate birds. And for Bob, it's just as much fun. Besides, he adds, you don't have to feed or pet your locator. He does occasionally talk to it.

The Monk

By
DORIS STEPHENSON PEET
Williamsburg

SPORADICALLY a Virginia newspaper carries an account of a parrot flitting about in someone's back yard. Sometimes these visitors remain a day or two and then are seen no more. At other times they are recognized as escapees from a pet shop, such as the Amazon who was reported to be hanging around a crabapple tree in Newport News last autumn. Recently, however, there has been a different picture developing.

In the late summer, a pair of birds resembling parrots started a nest on a transformer in a garden on Gwynn's Island. They flew all over the island, and many of the residents became interested in the odd pair and wondered how they would fare through a Virginia winter, or whether they would fly south with the other migrants. The birds, undisturbed by such anxieties, continued to build their cumbersome nest, which was large and somewhat circular with a round entrance hole about midway up. They chattered loudly as they went about their work of gathering sticks and twigs from all over the area. People began to put out bird seed, bread, and table scraps. All these were appreciatively gobbled up, but no one was able to discover what kind of wild food sustained the pair. Worry about their surviving the winter proved to be unnecessary, for they are hale and hearty in their snug home, with ample handouts from the islanders.

Gradually more has come to light about these tropical birds who seem to be able to live quite comfortably through our northern winters. They have been identified as a South American parakeet, *Myiopsitta monachus,* or monk parakeet. They like to travel in flocks and are pigeon-sized parakeets with feathering that is blue, green and yellow. Because they are so pretty, and are friendly and intelligent, they have been welcomed wherever they have chosen to live. The monk is about eleven and a half inches in length, and is greenish gray above, with a lemon yellow belly, and blue-gray flight feathers. He has a long, pointed bluish green tail, the bill is rosy flesh color, and the feet are dark.

This parakeet prefers hot summers and mild winters but thrives in colder climates too. It was at first believed that they could not reproduce here because they lay their eggs during our winter, which in Latin America is summer, but the birds adjusted without a bit of trouble.

No one knows when or how they first became established in our country. This is the first wild parrot to do so since the Carolina became extinct many years ago. Some, it is believed, escaped while being imported; others escaped from owners. Mr. Richard L. Plunkett, assistant to the National Audubon Society's vice-president for biology, says, "It is one of the noisiest parrots, and I'll bet many an owner turned them loose because of the racket." He also says the bird is not a good "talker."

Courtesy USDI Bur. of Sport Fisheries & Wildlife

The monk parakeet builds several nests, some just for shelter. Its brood nests are used over and over. Each year they add to their homes and often one nest will house several pair. There are nests in New York City that have been measured at five feet long, three feet wide, and one to two feet high. The birds usually place the nests twenty to thirty feet above ground in trees, on old buildings, on utility poles. In South America, these nests have been known to measure thirty feet in length, fifteen feet in height, and to house fifty pairs of birds. It is not unusual that the weight of such a nest breaks the tree. Experts say the bird can maintain itself in the desert, in wet climates, and in bitter cold, and so can be expected to extend its range southward to Florida and westward to the coast.

At present, this hardy, adaptable parrot is established

in the wild in the New York City area, in Massachusetts, and in parts of New Jersey and has been flourishing over the past four or more years. There are also permanent flocks that have been reported as far west and north as Milwaukee, Wisconsin. Birds have been seen in pairs in New Hampshire, Pennsylvania, Virginia, Tennessee, Florida and the District of Columbia, and federal agencies feel that the invasion of South and West will come. They are now considering whether to stop the importation of these birds, of which 20,000 come in annually. (They are now temporarily banned in the government's effort to stamp out a malady called Newcastle disease, which kills poultry.)

Wayne Trimm, a naturalist with the N. Y. Department of Environmental Conservation, says these wild parrots are escapees or descendants of escapees. The Monk parakeet is indigenous to southern Bolivia, Brazil, Paraguay, and Argentina.

A recent report by Gardiner Bump of the Division of Wildlife Research says: "Common sense clearly indicates that this potential pest should be eliminated in the wild and its further importation prohibited before it has become well established and thus very costly if not impossible to eradicate. This is clearly a situation where the bird lover or pet fancier must forego the pleasure of keeping or observing, in the countryside, this interesting parakeet lest it become another expensive pest."

He says further, "If it should become abundant, serious damage to agricultural and orchard crops can be expected. This might be moderate in the north, but increasing as its range extended south and west."

These words might well seem prophetic as more knowledge of the bird comes out of its South American homeland. In Argentina the monk parakeet substantially damages corn, sorghum, and sunflower crops as well as citrus and other fruits. Overall losses range from 2% to 15%, with some as high as 45% annually.

In large numbers it is a troublesome bird. It reproduces rapidly, is savage with other birds (one of our Virginia bird-lovers noted that no other birds come to her feeder when the parakeet is there), and methods of control seem ineffective. In Argentina, since 1947, nest burning has been tried, and shooting, snaring, netting, poisoning and repellents have not been successful. Bounties were offered and were paid on 427,206 pairs of feet in one province alone.

The Audubon Society doesn't express itself as strongly about the monk parakeet as some others do. They say they see no evidence, as yet, that it is a pest. It is living mostly in the cities and suburbs at present. If it should become established in rural areas, there is no question but that the birds would become a problem. Since they travel considerable distances and often in flocks, this is a distinct possibility, and if it continues to adapt so well and reproduce vigorously, it may one day rival the pigeon, the starling and the sparrow.

Waller Mill Park

By ALVA W. STEWART
Williamsburg

FEW American cities with less than 10,000 population can lay title to a 1,500-acre park with a lake for boating and fishing, two nature trails, platform-like tower affording a panoramic view of the lake and surrounding forest, and picnic facilities for 50 families.

With justifiable pride the city of Williamsburg (1970 population 9,069) has claimed such a distinction since late July, when Waller Mill Park officially opened as a municipal recreational facility. Located near Camp Peary in York County, the park is nestled in a forest of evergreens and hardwoods which encircles Waller Pond, the city water reservoir.

Twenty-five rowboats and a dozen canoes are available for rent at nominal fees; privately owned boats which pass an inspection test are permitted to use the reservoir for 50 cents per hour. To protect the city's pure water supply, no wading or swimming is allowed in the reservoir. Picnicking, fires, and fishing from the bank are confined to designated areas. Pets brought to the park must be leashed. Use of motor bikes is prohibited.

Picnicking facilities include a shelter area sufficiently large to accommodate 25 persons in addition to 49 sturdy yellow pine picnic tables, many of which afford picnickers a clear view of fishermen and boatsmen in the lake. Attractive redwood trash receptacles are dispersed at intervals throughout the picnicking area.

Two nature trails, one on either side of a large paved parking lot, provide an excellent training ground for the amateur botanist of any age. Among the numerous species of trees found along these trails are Virginia pine, red cedar, scarlet oak, beech, dogwood, and mountain laurel. At present temporary signs identify the major trees; eventually, permanent markers will replace these signs and furnish information for a self-guided trail hike.

The parking lot, located within easy walking distance of the boat dock, nature trails, and picnicking facilities, will accommodate some 75 vehicles and includes an area for buses and two spaces reserved for disabled persons.

A 75-foot-long bridge connects the boat dock with the picnicking area. Near the boat dock is a comfort station housing rest rooms and vending machines dispensing food and soft drinks. Design of the comfort station and observation tower brought recognition to Williamsburg architects Stanley and Carlton Abbott, who received a certificate of distinction in the 1972

Virginia Architect Planners Show for their design of these two structures.

Park development is occurring in several phases. Phase 1 has been completed at a cost of $225,000. Phase 2, estimated to cost $400,000, will commence early in 1973. Acquisition of approximately 250 acres for park expansion, construction of a second picnic shelter and additional tables, and extension of the nature trails will constitute the second phase of park development. A second parking lot more convenient to the picnicking area than the existing lot is also included in Phase 2 plans.

Construction of a tunnel linking the upper and lower lakes of the reservoir is projected for a subsequent phase, as is a maintenance building for storage of equipment and supplies and an 18-hole golf course. The tunnel will run underneath an abandoned railroad bed for some 125 feet. Complete development of the park is not expected until the end of this decade.

A master plan for park development has been drafted by a six-member citizens advisory committee appointed by Mayor Vernon Geddy, with assistant city manager Wayland Bass and recreation director Paul Hudson serving as ex-officio members. This committee will revise and update the master plan, which will be used by City Council as a guide for comprehensive development of the park.

Financing of Phase 1 has been a cooperative venture between federal, state, and municipal agencies. The U.S. Bureau of Outdoor Recreation provided 50 percent of the $225,000, the Virginia Commission of Outdoor Recreation 25 percent, and the Williamsburg City Council 25 percent. Phase 2 financing will follow the same formula. Use of federal revenue-sharing funds by the city for park development during the next five years is a distinct possibility.

During the first ten weeks of the park's operation—July 25-September 30—more than 4,000 tickets for boating and fishing were issued. Almost 1,000 persons used the picnic shelter, excluding users of open picnic tables. Weekend use of park facilities in August and September was especially heavy.

Utilization of Waller Mill Park facilities to date supports recreation director Hudson's contention that many local residents are as interested in fishing, boating, hiking, and picnicking as they are in visiting the city's renowned historic area. An appreciation of the past is an important element in any individual's life, but a genuine respect for the beauty of nature, coupled with the joy of outdoor activity, is equally important, Hudson believes.

As the working hours of local residents decrease in the years to come, their desire for outdoor recreation is almost certain to increase. Facilities at Waller Mill Park, both existing and projected, will go far toward meeting the accelerated demand of these residents for wholesome outdoor recreation and, at the same time, enhancing the community's physical attractiveness.

Waller Mill Park boat dock is located between parking lot and picnic area.

Carlton Abbott photo

WOODCOCK
in Virginia

By W. H. TAYLOR
Game Research Biologist

THE American woodcock (*Philohela minor*), "timberdoodle," "wood snipe," "bog sucker," call him what you will, but he is one of our less known game birds in Virginia. Due to his nocturnal habits and camouflaged color, he is seldom seen by residents in many areas where he may be present in large numbers during the spring and fall migration. Local residents questioned during the fall migration in 1972 on the Eastern Shore were not sure if they had ever seen a woodcock, yet that same evening three Game Commission employees observed 29 woodcock fly into one field nearby during 30 minutes following sunset. The following day six hunters, using five dogs, collected 10 woodcock from adjoining timberland. This was not a big day of woodcock hunting, of course; four dogs and three men (the author included) knew very little about woodcock hunting. The cutover brush-land area where birds were observed that previous evening was hunted thoroughly as was nearby mature hardwood and pine woods of different types. During the first six hours only three birds were collected. We decided that perhaps the dogs were flushing the woodcock without our observing them, so all but the woodcock-trained dog were left in the trucks while we made a second swing through the cutover area. In two hours ten woodcock were flushed and seven were collected.

The woodcock is easily recognized by its long bill, short neck, plump body and short tail. The eyes are set far back and high on the head. This enables the bird to see in a complete circle without moving its head. The warm brown coloration is a "dead-leaf pattern," making it extremely difficult to spot. "Timberdoodle" is an apt nickname for he occurs mostly in or near damp woodland, wooded swamps, alder thickets and moist, leafy bottom lands, and his erratic flight cannot be mistaken once seen.

The woodcock range (Peterson 1947) includes breeding grounds from north Florida and southern Louisiana to Nova Scotia, southern Ontario, northeastern Minnesota and southern Manitoba; wintering grounds extend from New Jersey and the Ohio Valley south. Migration of woodcock is governed by freezing and thawing of the ground.

Woodcock may be found in Virginia practically the year round depending on the weather. During the fall and spring migration, they may occur in large numbers, especially along the Eastern Shore and tidewater areas. Woodcock breeding range in Virginia appears to be statewide. Woodcock have been harvested by bird hunters as late as the third week in January. During mild winters, woodcock have been observed all winter in southern Virginia. Spring migration starts in late February to April as soon as the ground thaws.

The breeding season occurs during March and April when the male actively solicits the attention of the female from the time of his arrival on the "singing grounds" until most of the woodcock chicks have hatched.

Courtship and breeding activity centers around the "singing grounds," which may be used by several males simultaneously if the field is large enough. The singing ground (Liscinsky, 72) is a clearing free of trees and shrubs, and may range in size upward from 100 feet square. Roadways, pasture, cultivated fields, lawns, gardens and even baseball diamonds may be used. It may be any shape or size but is always located near food and cover.

The courtship behavior includes a courtship display consisting of spiraling flights, made at dawn and dusk, to a height of several hundred feet. During the flight of about one minute duration, which begins and ends at a particular clearing, the male emits characteristic soft twittering with his wings and chippering sounds with his voice. On the ground between flights, he emits a "peenting" sound difficult to describe but which, once heard, cannot be mistaken. The female is attracted to the site and mating ensues.

The nest is built on the ground usually in the edge of small trees or shrub thickets but sometimes found in mature timber with shrub understory. Nesting may start in March in Virginia with the first hatches occuring the last of March and extending into June. One brood was observed on Quantico on March 27. Clutch size is two to four eggs, which are incubated 19 to 22 days. The young grow rapidly and can fly in 12 to 14 days. At one month the young are difficult to tell from the parent.

Liscinsky (72) in Pennsylvania found that male woodcock averaged about 5.6 oz. and females averaged 7.0 oz.

The woodcock feeds primarily in moist wooded areas with his favorite food being earthworms, which he se-

Female woodcock on nest.
Photo by Leonard L. Rue III

Male woodcock on singing ground.

Leonard Rue photo

cures by driving his long bill into the earth and capturing the worms. The upper bill of the woodcock is flexible, enabling it to probe the soil for earthworms, insect larva and other food items. The soil must be moist to provide proper conditions for probing. The soil where woodcock have fed will be punctured with many holes about one-quarter to one-half inch in diameter. Woodcock prefer clay or loamy soil to sand. Liscinsky (72) found captive birds ate garden worms, meal worms, fly larva and small grasshoppers in addition to earthworms.

The status of the woodcock as a game bird could be termed "incidental" in Virginia, meaning it is taken occasionally by the quail or grouse hunter, but there are very few woodcock hunters in Virginia. Woodcock hunting is very popular in the more northern states and appears to be growing in popularity in Virginia.

Virginia's woodcock season usually starts with the small game season and closes the middle of January. Because woodcock are migratory, the season and bag limits are set by the individual states within limits set by the federal Bureau of Sport Fisheries and Wildlife. Two annual surveys are used by the federal BSFW to determine the basis for establishment of woodcock hunting regulations: (1) a singing-ground survey provides an index of the post-migration breeding population, and (2) a wing-collection survey provides data on relative reproductive success of the species the previous breeding season, and changes in size and distribution of harvest by survey participants.

The singing ground surveys are conducted by state and federal employees and interested private individuals in all states having breeding populations of woodcock. In Virginia 80 survey routes were randomly selected, and each route consists of ten stops along a given road with two-minute stops being made every 0.4 mile for a total length of 3.6 miles. The Bureau of Sport Fisheries and Wildlife's Migratory Bird Population Station sets the dates the routes are to be run and compiles the data collected. Each route in Virginia is censused once in relatively calm, warm and rainless weather during April 10-30. Two-minute listening stops are made, with the count beginning from 10 to 30 minutes after sunset depending on the amount of cloud cover. The number of different birds heard are counted and recorded and a report completed and mailed to the Migratory Bird Population Station. The 1972 breeding indexes (Clark 1972) were determined from data assembled from 752 comparable routes throughout the woodcock range. There was a 2.19 percent increase in breeding male woodcock range-wide.

The wing-collection survey is conducted by the Migratory Bird Population Station with assistance from various states. Envelopes are sent to selected woodcock hunters with instructions for mailing woodcock wings to MBPS. After the hunting season is over a "wing bee" is set up, with biologists from cooperating states assisting in sexing and aging of the wings at the Migratory Bird Population Station, Laurel, Maryland. Ten to 12 biologists spend three to five days sexing and aging 18,000 to 20,000 wings. The wings are sexed by measuring the length and width of the outer primary feathers and aged by the difference in coloration of the secondary feathers. The 1971-72 wing collection survey resulted in 18,871 wings being sexed and aged, of which 99 were received from Virginia hunters. The overall productivity index determined from wing collection (Clark 1972) showed range-wide hunter success declined 5.2 percent in 1971-72. The small sample of wings collected in Virginia was not large enough to be significant.

The major problem with Virginia woodcock hunting appears to be locating a concentration sufficient to hunt. Resident populations are generally small, and it is difficult to know when the birds are migrating. Fall migration may vary from late October to January, with the large flights generally occurring during late November or early December.

To enjoy woodcock hunting, a good close working bird dog is desirable. Many bobwhite quail dogs will not work woodcock while others range too wide to work satisfactorily in the brush and thickets. Woodcock hunters use a wide variety of pointers, setters, spaniels and other pointing and retrieving breeds. The close-working spaniels make excellent woodcock dogs, and some English setters trained to work close also are very satisfactory.

In my limited experience of woodcock hunting, I found my medium-ranging English pointer and German shorthair generally were unable to point the birds. Yet the shorthair's ability as a retriever was an asset in locating downed birds, which otherwise were difficult to find.

Fish Attractors for Fishing Lakes

By RONALD PIERCE
Assistant Fish Biologist

ON the morning of September 9, 1972, three fish attractors constructed of tires were placed into the waters of Lake Shenandoah, a 36-acre lake owned by the Commission of Game and Inland Fisheries in Rockingham County. These attractors should provide "hot spots" for anglers plying the depths of Lake Shenandoah in search of such game fish as crappie, largemouth bass, and the tackle-busting musky. Fish attractors act like artificial shoals and provide a place for aquatic plants and invertebrates to live. These food organisms in turn attract small fish which come to feed and to obtain protection. Grouping of small fish around the man-made shelters is what causes the attractions to become excellent spots for fishermen to drop a line. Crappie fishermen in particular should find the concentrating properties of the new shelters to their liking, since crappie are normally dispersed during the summer in deep water, making good catches difficult to achieve.

Each fish attractor consisted of one 12-to-16 foot section of steel pipe, with the pipe being driven into the lake bottom in water 8 to 12 feet deep. A steel post driver was found to be the best tool for implanting the steel posts since swinging a sledge hammer from a rocking boat is very difficult. Once a pipe was in place, strings of tires, each consisting of seven to nine individual tires, were then bound together with scrap telephone wire in a manner designed to increase their attractiveness to the fish. Holes were drilled into the tires to facilitate sinking, as the holes allow trapped air to escape. The strings of tires were then placed in a boat and transported to where a steel pipe had been placed. Three people manned each of the two boats used in the operation. One person operated the motor, positioning the boat so the other men could loop the end tire of each string over the steel pipe, or otherwise bind the tire string to the pipe. When this had been accomplished, the strings of tires were sunk in such a manner that the tires radiated out in all directions from the steel pipe. Seven to nine tire strings were used to construct each attractor. Upon completion, the uppermost tires were three to four feet below the surface of the water. Approximately three feet of steel pipe, which was painted white, was left above the water in order to permit easy detection of attractors by fishermen.

To our knowledge, this is the first time tires have been used in Virginia for fish attractors. In the past, the most common method of building artificial shelters has been to fasten small trees around a wooden post driven into the lake bottom. The small trees were then anchored in place by stones bound with rope. This method has been used on three other lakes owned by the Commission: Orange, Burke, and Brittle. While tree structures definitely attract fish, they deteriorate quickly and must be replaced every few years. If the new type of fish attractor is successful, its value should be long lasting. Nevertheless, success of the new attractors, along with two others previously constructed in the lake, will be evaluated carefully to determine if they perform to expectations.

Fish attractors, whatever the material used in their construction, can also be useful in attracting fishermen to lightly fished but productive waters, thus distributing fishing pressure over a wider area. In other lakes, attractors can be used to attract fish to areas now shunned for lack of cover.

Fish attractors were constructed by attaching strings of old tires to central anchoring posts, and then sinking them.

If tire fish attractors prove successful, they will be a useful fisheries management tool on small lakes where the considerable amount of time needed for construction should be rewarded by a noticeable effect on fishing quality.

When considering the use of fish attractors on reservoirs, however, any fluctuations in water level should be considered. Fluctuations, if present, could expose the tire fish attractors at low water and thus do harm

(Continued on page 16)

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

LONG-TERM GAME COMMISSIONER STRAS PASSES. Beverly W. Stras, who served on the Game Commission for a total of 33 years, died at his Tazewell home March 20. Stras retired from the Commission in 1962 after serving as its chairman for 18 years. He was first appointed to the Commission by Governor Harry Byrd in 1926. He served continuously until October, 1939, and was reappointed in July of 1942. He was elected chairman in 1944 in which capacity he served ably until June 30, 1962. A portrait of Mr. Stras was prepared for hanging in the Commission offices upon his retirement as a memorial from his fellow Commissioners.

GAME COMMISSION EMPLOYEES CHANGE POSTS. James F. McInteer, Jr., of Richmond has been named Assistant Director of the Virginia Game Commission, reports Executive Director Chester F. Phelps. Harry L. Gillam, also of Richmond, has been promoted to Education Division Chief to succeed McInteer.

McInteer, a native of Quantico, Va., has been serving in the post of Education Division Chief since 1962. Gillam has been Information Officer since 1961 when he came to Virginia from a similar position with the Tennessee Game and Fish Commission. He is a native Oregonian and a graduate of Oregon State University. McInteer is a graduate of Randolph-Macon College and VPI & SU.

McInteer will help lighten the ever increasing work load of the Executive Director, who has held down the post unassisted since 1958. He will represent the Director on many occasions and will handle many of the continually increasing administrative duties.

Gillam will assume editorship of the Commission's VIRGINIA WILDLIFE magazine and will direct the activities of the Education Division. Responsibilities include educational work with schools, civic clubs, sportsmen's clubs and garden clubs and involve movies, TV, radio, news service, publication and personal contacts.

LAND AND WATER FUNDS CHOPPED. Administration budget cuts included a $250 million cut out of the $300 million appropriated for acquisition and development of recreational facilities during the 1973-74 fiscal year, reports Rep. Roy A. Taylor, Chairman of the House National Parks and Recreation Subcommittee. "The President's 1974 budget does not include one dollar of new money for federal land acquisition," said Taylor, calling it "extremely poor economy to cut back on these programs at a time when land acquisition costs are skyrocketing." The 11th District congressman cited numerous areas which Congress has authorized for acquisition but for which purchase funds have not been provided and warned that continued delays "will just cost the American taxpayers that much more in the future."

Land and water conservation funds are also used by the states to help finance the purchase of land and development of state recreation areas including parks, boat ramps, and wildlife management areas. Cutbacks will amount to over 60% in some states, thereby curtailing local effort to provide recreational areas as well. Several recent Game Commission projects including wildlife management areas, state fishing lakes and streams, and boat ramps have been financed in part from this source.

COMMISSION REPRESENTATIVES ON VPI COMMITTEE. Dr. Allan A. Hoffman, Danville, Va., and Mr. John P. Randolph, Spring Grove, Va., both of whom are Commissioners with the Virginia Commission of Game and Inland Fisheries, and Mr. Jack Hoffman, Chief of the Commission's Fish Division, met with VPI faculty personnel at the Blacksburg campus on April 24-25, 1973. As members of the fisheries subcommittee of the Advisory Committee to the Division of Forestry and Wildlife Sciences in the College of Agriculture and Life Sciences, the trio reviewed the current fisheries program and made recommendations to the school. Dr. Hoffman was elected permanent chairman of the fisheries subcommittee in May of 1972 during the initial meeting at VPI of the newly formed five-part Advisory Committee.

In Nature's Garden

WI

By ELIZABETH MURRAY
Charlottesville

THERE is considerable similarity between the plants of eastern North America and those of eastern asia. One manifestation is that most wild species of azaleas are native only to these areas of the world. Two outlying species are found, the Pontic Azalea in the Black Sea-Caucasus region and the Western Azalea in California and Oregon. Neither of these prosper in the eastern United States, while the species from east Asia transfer readily and do well. As a consequence, the Asian azaleas have been subject to intense horticulture and there is an almost unbelievable number of cultivated species, varieties and hybrids. But for the purists among us there are still the wild species in the woods.

The first wild azalea to bloom for us in Virginia is the Pinxter-flower, *Rhododendron nudiflorum*. This may come out at the end of March in lower sheltered areas and will bloom through April and May. It is a shrub 2′ to 6′ high with narrow, ovate leaves which are deciduous (all the wild azaleas here shed their leaves in winter). The tubular flowers are flesh-colored to pale pink, sometimes a deep ruddy pink at the base. The flowers come out before the leaves, hence the specific name *nudiflorum*. Pinxter-flowers are found in rocky woods and swamps from Maine west to Illinois and south to Florida and Texas.

The name Pinxter comes from the Dutch word for Pentecost. In the days when New York was known as New Amsterdam, the Dutch settlers of that area made a great occasion of Pentecost, with what started as a religious festival developing over the years into a feast of merry-making lasting several days. During this time the houses were gaily decorated with live flowers. The celebration became known as the Pinxter Frolics and since *R. nudiflorum* was one of the flowers most commonly used, it acquired the name Pinxter-flower.

I always think of the Flame-Azalea, *Rhododendron calendulaceum*, as a June flower, but that is because I encounter it mostly in the woods around Mountain Lake, at an elevation of around 4000′. Lower down, it is well out in May. Flame-azaleas have a magnificent color range from almost red, through all shades of orange and copper, to a pure, brilliant yellow. The shrubs may be quite tall, up to 15′, loosely branching, with fine hairs on the young branchlets. The flowers come out at the tips of last year's branches at the same time that the leaves are opening. Flame-azaleas are native to the Appalachians, growing in open deciduous woods and along the margins of the forests from Pennsylvania, West Virginia, and Ohio down to Georgia and Alabama.

The spongy greenish-white growth which is often found on this azalea is always cited as being an excellent source of fluid for the dry traveler. The liquid which is produced when you bite into one of these growths is a bit sour for my taste, but I suppose I should welcome it if I were really thirsty and had no other possibility for drinking.

Flame-azaleas have almost no fragrance, relying on color for their powers of attraction. A later azalea which has a very strong, sweet fragrance is *R. viscosum*, the Swamp-Honeysuckle or Clammy Azalea. It is a rather densely branching shrub with shiny, sticky leaves which are already well developed at flowering time. The flowers are white, the lobes of the corolla short and slightly pointed, the corolla tube long and straight. The shrub grows in wet situations from Maine to scattered locations in South Carolina.

Flame-Azalea.

The name azalea is perhaps not very well applied since it comes from the Greek word for "dry" and many azaleas are perfectly happy in wet places. But Linnaeus received one of the only two azaleas which he examined with a comment that it was found in a dry habitat, and he thought up the name. He gave azaleas their own genus, but more recently they have been included with the rhododendrons and accorded merely sub-generic status. Because of the intense horticulture to which this whole group has been subjected, the taxonomy is in

D AZALEAS

Illustrated by Lucile Walton

some confusion, but it does seem reasonable at least to keep all the members in the same genus.

There is a long Indian legend concerning wild white azaleas. An old herb woman was brewing a magic potion into which she dropped a handful of pink flowers. These were gathered a long way from her home since the shrub which she had transplanted outside her own front door never bloomed (soil too basic, probably!). Suddenly a dog burst into the clearing and seized a gourd of cornmeal which she had laid ready for cooking. Furious, she picked up a red hot rock and flung it at the dog. Burned and furious in his turn, he leapt up

Rhododendron calendulaceum.

into the sky, spilling the cornmeal as he went. Where the meal fell on the flowerless shrub, it became transformed into brilliant white azalea flowers. Where it fell in a wide track across the sky as the dog limped over, it became the Milky Way, known to the Indians as "where-the-dog-ran."

The Cherokees have a legend about flame-azaleas. The Sky Painter from above cut off the rabbit's tail (which in those days was supposed to be long and bushy) to use as a paintbrush. This made all the animals angry and they started to fire arrows, in volleys of six, up into the sky. The Sky Painter was just getting ready to paint the sky brilliant shades of orange and yellow, and some of the arrows landed in the paint. He flung them back as fast as they arrived and everywhere that a bunch of six arrows landed, a flame-azalea appeared—with five stamens and a pistil. These flowers are still sometimes called Sky Paint Flowers.

Our three main wild azaleas were introduced into the gardens of Europe a long time ago. At the end of the seventeenth century, John Bannister, an English missionary to Virginia and a keen naturalist, sent seeds of *R. viscosum* to his friend Henry Compton. Compton was then Bishop of London and an enthusiastic gardener, and he successfully grew the clammy azalea in the gardens of Fulham Palace. Unfortunately his successor was not so interested in flowers, and the azaleas became neglected. In the eighteenth century, the Bartrams were responsible for sending many seeds and plant specimens to England. They were encouraged and sponsored by Peter Collinson, a Quaker woolen merchant who was really more interested in gardening than he was in textiles. John Bartram, himself a Quaker from near Philadelphia and an accomplished botanist, undertook several journeys through the South, collecting plants for Collinson, and John's son William followed in his father's footsteps. It is known that they supplied Collinson with three kinds of azaleas, two of which were *nudiflorum* and *viscosum,* and the chances are high that the third species was *calendulaceum.* They certainly saw the flame-azaleas, and William Bartram's glowing account of it in his *Travels* (where he calls it the Fiery Azalea) may be the first description of the species.

At the end of the eighteenth century, André Michaux, the French botanist, brought flame-azaleas to Europe with his other plant collections. They suffered a fairly adventurous passage since the boat was shipwrecked in the English Channel and Michaux had to salvage his specimens from the wreck and from the sea water. He seems to have divided his haul of azaleas between gardens near Paris, and some at Ghent, in Belgium. In the aftermath of the French Revolution, many fine gardens were neglected and his French collections perished, but at Ghent the flame-azaleas survived. They were distributed amongst several gardeners in the area, including a baker called Mortier. Mr. Mortier crossed the flame-azalea with the Pinxter-flower and from this original hybrid the well-known Ghent series of cultivated azaleas was developed.

But in Virginia we are lucky enough to have the original parents growing wild. We are spared the necessity for all this extensive horticulture, and need go to no trouble to get a glimpse of a fine azalea. All we have to do is to go out into the woods in the spring and summer, and simply look around.

Thoughts *on a Mountaintop*

By BILL ANDERSON
Grundy

A LONG walk in the woods is an excellent way to meditate, to find ourselves. What better way can I discover the real me than on a mountaintop where I may view God's handiwork, the unbelievable expanse of sky, the majestic mountains that stretch farther than the eye can see, the rivers that wind their way between the hills as they did for untold centuries before I saw them, as they will do for centuries after I am forgotten.

As I stood on my mountaintop perch a hawk sailed effortlessly, riding each air current. Perhaps he is really the ruler, not man. For he has no ties, no taxes, no ulcers, no wars. Truly he is free and the wilderness belongs to him.

Somebody once said we needed not nature, that we could live in a completely artificial world, that our natural surroundings are here only for our convenience, our commercial use, to fill our pockets with wealth.

Pity that man, that he is so naive, so unfeeling, so thoughtless. For he will never take the time to look at, to really see, a flower just bursting into full bloom, or the bee that gathers its sweet nectar and pollen. Nor will he appreciate the bird that sings from a tree or the gray squirrel that scampers away at his approach.

He may never stop beside a clear bubbling brook or a mountain stream that cascades its white waters over slippery clean stones. Likely he will never take time to watch a minnow or crayfish as it goes about its daily, never ending search for food. Or he will never remove his shoes and socks and soak his feet in the cool water.

As I look from my lofty vantage point, far below I can see this very man's fine home, his expensive automobile, his children, who will be taught to enjoy nothing other than that which is man-made.

Perhaps he will never sit on a warm spring evening as darkness steals away the light and listen to the call of a whippoorwill or the hoot of an owl, just for the pure joy of hearing them.

From my mountaintop the achievements of man, his stumbling, falling, seem trival when compared to God's accomplishments. How perfect He made nature, the earth, heavens and universe. How vast he made them.

Perhaps of all his work on earth that which is most mysterious is life itself. The unceasing regeneration of both plants and animals. A process that has gone on for millions of years, that may not end for another million.

When I ascended my mountain into the forest I felt lonely, poor, unworthy, but when I descended, my boots scraping over the sharp stones, I had a completely different view of myself. I had reassessed my values and my goals. No longer did I feel poor or lame although monetary wealth I do not have. I felt proud, akin to the hawk I had watched. I felt close to nature, close to God, and at the same time felt humble.

Now I know the true meaning of the words spoken so many years ago, "He leadeth me beside still waters . . ."

I am rich.

Fish Attractors (Continued from page 12)

aesthetically. In addition to this, exposed fish attractors could pose hazards to the unwary boating enthusiast during after-dark operations. Happily, both these problems are nearly nonexistent on most small lakes such as Lake Shenandoah, since their water levels remain virtually constant all year, and at least in the case of Commission-owned lakes, both power boats and after-dark operations are prohibited, the only exception being that slow moving electrically powered boats may be used.

An added benefit of using tires for fish attractors is that it provides a manner in which to dispose of some waste tires. Since adequate landfill sites are often scarce, this reuse of an otherwise useless resource can yield an added premium.

The tires for the Lake Shenandoah project were donated and delivered to the lake by two local tire companies in Harrisonburg.

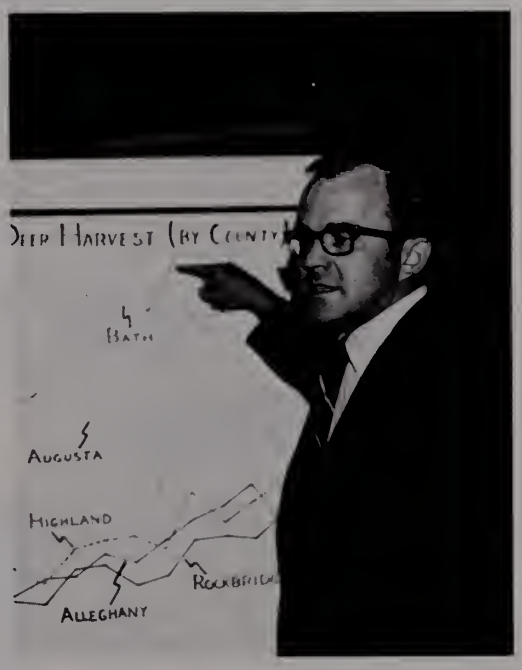
A large number of volunteers from the Rockingham-Harrisonburg Chapter of the Izaak Walton League assisted on this project, making completion easier. Their help and enthusiasum was appreciated by the four Commission biologists also working on the project. It is hoped that other sportsman groups in Virginia will participate in similar projects to improve fish and wildlife habitat, since using volunteer labor is often the only way some projects are economically feasible.

In closing, it is important to remember that fish attractors are only one of the tools which can be used in fisheries management. Taking into account the large expenditures of time needed in their construction, no large-scale use of fish attractors should be undertaken before the expected benefits are thoroughly examined. It is also important to remember that not all species respond to attractors; therefore, their construction to attract fish which will not congregate around them is pointless. In suitable waters, with the correct species present, however, fish attractors definitely have a useful place in modern fisheries management and their use is worth considering.

Know Your BIOLOGISTS

Text and Photos by F. N. SATTERLEE
Information Officer

DENNIS D. MARTIN
District Game Biologist



Although Athens, Ohio, was his place of birth, Dennis Martin grew up in the small rural coal mining town of Murray City, Ohio : population 650. Following his graduation from Murray City High he enrolled in night school at Ohio University majoring in drafting and business administration. While doing this he was working a full-time day job in the grocery business.

Becoming restless with this heavy schedule, he switched to a school of banking and later worked in a bank as a loan clerk and teller. However, he soon found that this was not for him, and he enrolled in Ohio State as a full-time student majoring in forestry. After receiving his B.S. he applied for graduate work at V.P.I. and graduated with an M.S. in wildlife management in March of 1972.

Dennis joined the Game Commission in June of 1972 and was assigned to duty in the Staunton area, where he is responsible for five counties. To him the most rewarding aspects of his work are the opportunity to put into practice the skills and knowledge that he has acquired and to be so completely involved, as he is, in work that is biologically and ecologically important. He and his wife, the former Carole Myers of Logan, Ohio, and their two daughters live in Deerfield, Virginia.

WILLIAM ALAN GUTHRIE
District Game Biologist

When Al Guthrie was born in Ripplemead, Virginia, his father was postmaster there, and they made their home on a small farm nearby. His paternal grandfather started early in Al's life to teach him about the outdoors and wildlife and hunting. He gave Al his first rifle, a .22, and taught him how to hunt squirrels. They spent considerable time together camping and hunting. Al learned the value of seeing as well as harvesting and eating wildlife and the importance of never taking any game that he did not intend to eat.

Following graduation from high school in Pearisburg, Virginia, he worked as a carpenter's helper, shipping clerk, and in 1952 enlisted in the U. S. Air Force. Al received training as a radio operator and spent 18 months of his four-year tour in Tripoli. After being discharged in 1956 he entered West Virginia Concord College and subsequently transferred to VPI where he obtained a B.S. in agricultural education. For the next three years he taught school and then returned to VPI for an M.S. in wildlife management.

Al joined the Game Commission as a biologist in June of 1964 on the day following his graduation from VPI. He is currently District Game Biologist in the northern section of the Jefferson National Forest and is responsible for nine counties. His greatest satisfaction is working with people and being able to pass on his knowledge of the values of wildlife. Al's wife is the former Maleta Cooper of Princeton, West Virginia. The Guthries have one son, and they live in Ripplemead.

Bird of the Month:

Black-billed Cuckoo

By JOHN W. TAYLOR
Edgewater, Maryland

NO cuckoo clock ever sounded like any of our North American cuckoos. Most of these clocks are of European origin, and imitate the call of the old world cuckoo, a larger, heavier relative with an entirely different voice. Its two-syllabled *kuck-uck* is the "wandering voice" so characteristic of spring in the English countryside.

North American cuckoos have a rythmic series of clucking notes with a hollow wooden quality. The two common species, the black-billed and the yellow-billed, sound very much alike, despite claims by field manuals that they are distinctive. The black-bill is said to deliver its notes in accented groups, unlike the continuous sequences of the yellow-billed, but there are so many variations by each that this difference is seldom a useful tool for identification.

Even with the bird in sight, it requires fairly close scrutiny to separate the two. The differences in bill coloration, which give them their names, are the hardest marks to detect in the field. Instead, look for the bright rufous red in the wings of the yellow-billed (lacking in its relative) and the contrasting spots on the under side of the yellow-bill's tail (less distinct in the black-bill). The clincher, if it can be noted, is the red eye-ring of the adult black-billed.

Of the two, the black-billed's breeding range is the more northerly, with its center in the border states and southern Canada. It is less numerous to the south, where it prefers higher elevations. Consequently, in Virginia it is more frequent in the western part of the state, though it is by no means confined to that region. It has been known to nest near Richmond and Washington, and even on the Eastern Shore, and during migration they occur regularly state-wide. They winter in northwestern South America, as far down as Peru.

The nest of the black-bill, while flimsy and poorly constructed, may be quite substantial. The mass of large twigs is usually placed low, at less than 15 feet, and is sometimes lined with softer materials, such as the catkins of blossoming oaks. Its eggs, surprisingly, are considerably smaller than the yellow-bill's.

There are a few instances of black-billed cuckoos laying their eggs in the nests of other birds. This is perhaps to be expected in view of its relationship with the European cuckoo, in which the parasitic habit is well developed. In the American species, this is not considered true parasitism, but rather an incidental action, unplanned and of rare occurrence.

Edited by ANN PILCHER

Bagged His Limit

Ten-year-old Richmonder Jamie Maylor brought down his second deer of the past hunting season December 23 in Buckingham County. Alone on the same stand successfully used by his older brother opening day, Jamie hit the 10 pointer at a distance of about 63 steps, on Town and Country Hunt Club land along the James River. Rack of the over-200-pound animal scored 182-⅜ by Boone and Crockett measurement.

Lizards Book

Youth groups, leaders of outdoor organizations, science or biology teachers may obtain a copy of the booklet "Lizards of Virginia" by writing to its publisher, Virginia Herpetological Society, at any of three addresses: 2623 Military Rd., Arlington, Va. 22207; Box 273, Route #5, Bedford, Va. 24523; or 4706 Tallahassee Ave., Rockville, Maryland. Use of the booklet—one of a series of special VaHS Bulletins—may add a new dimension to outdoor activity. None of Virginia's ten lizards is poisonous or harmful, though some may nip if mishandled.

Shooters' Calendar Available

The "1973 Shooters' Calendar," listing more than 30 major national and international shooting competitions, as well as major archery events, is now available for 25 cents from the National Shooting Sports Foundation, 1075 Post Road, Riverside, Connecticut 06878.

Keep Virginia Green poster contest top entry, by Susan Garbee of Danville, skillfully carries out contest theme: "Trees—for People."

Conservation Center Dedicated

Photo by Finnegan & Assoc., Wash., D.C.

Mrs. Richard Nixon and National Wildlife Federation President N. A. Winter, Jr., examine plaque on the Laurel Ridge Conservation Education Center, Vienna, Va., dedicated March 16 by Mrs. Nixon. The new 20-acre NWF Center provides space for training sessions, audio-visual presentations, nature walks and demonstration areas.

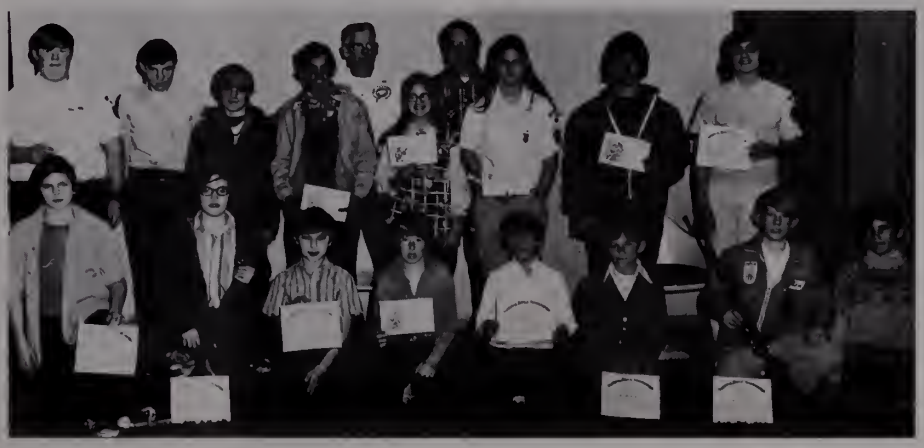
Winners of the 21st annual Keep Virginia Green poster contest, sponsored by Virginia Forests, Inc., in cooperation with the Virginia Division of Forestry, include *Susan Garbee,* 15-year-old sophomore at Danville's George Washington School, 1st prize—$200; *Mike Mullet,* 9th grader at Kate Collins Junior High, Waynesboro, 2nd prize—$150; *Leslie Trotman,* 17-year-old senior at Oscar Smith High School in Chesapeake, 3rd place—$100; and *Ann Priddy,* 17-year-old senior, Hermitage High School, Richmond—4th place, $50. Seven-hundred thirty-one other winners shared in the prizes totaling over $3,000.

The first prize poster is to be reproduced in full color on better than a quarter million Keep Virginia Green forest fire prevention book covers, which will be distributed to Virginia students this fall. Second-place winner Mullet earned an extra $30 for using an imprinted label from a 1972 KVG book cover in his design.

The contest produced 17,747 entries this year. Its purpose: to create a better understanding of the importance of the forest and its related values to the economic and environmental well-being of all Virginians.

Rifle Club Course

Instructor Del Campbell of Woodbridge provided this photo of 16 of the 23 young men and women belonging to the Dale City Junior Rifle Club who successfully completed a course covering rifle marksmanship, hunter safety, and firearm safety at home.

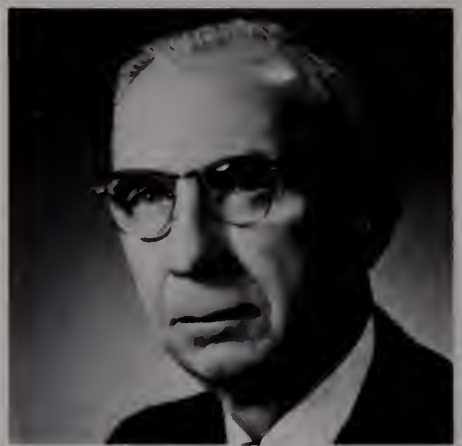


Edited by HARRY GILLAM

Decoy Carver Show Slated for Richmond

The Northside Lions Club will host the first annual "Wildfowl Carving and Art Show" in Richmond May 19 and 20. The show will be held at the John Marshall Hotel at 6th and Franklin Streets Saturday from 10 to 10 and Sunday from 10 to 5. Famous carvers and artists from all over the East are expected to exhibit. Admission is $1.25 for adults and 75¢ for children, and proceeds will go toward Lions Club civic projects. There will also be door prizes and gifts.

State Forester Dean Retires



State Forester George W. Dean, a veteran of 44 years' service with the Commonwealth, will retire to be succeeded by a colleague of 28 years, Wallace F. Custard, presently Chief of Forest Management.

Marvin M. Sutherland, Director of the Department of Conservation and Economic Development, in announcing Dean's retirement said, "Virginia has been very fortunate in having had the services of so able a forester and state government administrator who has kept the Virginia Forestry Division ranked with leaders in the nation."

One of Dean's outstanding contributions to the improvement of Virginia's forest resources is the Reforestation of Timberlands Act, providing incentives to landowners who plant pines.

In 1965 Dean received Virginia Wildlife Federation's "Forest Conservationist of the Year" award for Virginia and went on to win the national "Forest Conservationist" award given by the National Wildlife Federation.

Dean's successor, Wallace F. Custard, has been with the Division of Forestry since 1946. "Through Custard's efforts the Virginia Division of Forestry has kept pace with new developments in planting site preparation, reforestation techniques, silvicultural methods and equipment knowledge and materials to accomplish the forestry work that can and must be done if Virginia is to retain her position among the leaders," said Sutherland.

Custard was given the "Forest Conservationist of the Year" award by the Virginia Wildlife Federation in 1970.

What Do You Do For An Encore?

Harold Lanter of Madison Heights killed this fine buck on the last day of the hunting season in Amherst County. The 16 point trophy was Lanter's first deer.

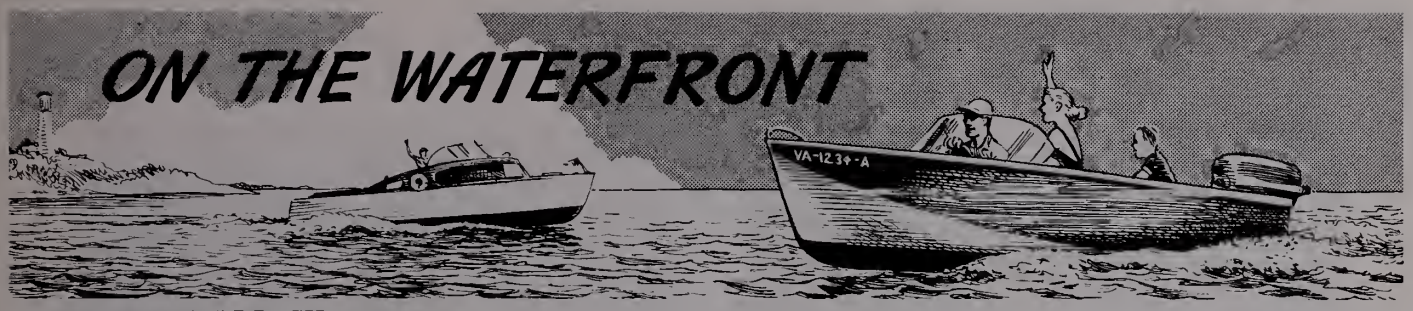
Archery Trophies

Dr. Glen Parker of Newport News downed this handsome buck with a well placed arrow at thirty yards. The deer had eight points and weighed 145 pounds.

This eight pointer was bagged in James City County by William Verniel, also of Newport News, holding the bow. His twin brother and hunting companion, Mike, is on the right of the trophy.

Game Commission Safety Officer Recognized

Virginia Game and Inland Fisheries Commission Safety Officer James N. Kerrick recently was presented with a plaque awarded by Flotilla 32, United States Coast Guard Auxiliary for his outstanding contributions to boating safety. In presenting the plaque, the Flotilla Commander, Colonel William O. Antozzi, said that Mr. Kerrick's contributions to boating safety encompassed a span of nine years from 1964 to 1973.



Edited by JIM KERRICK

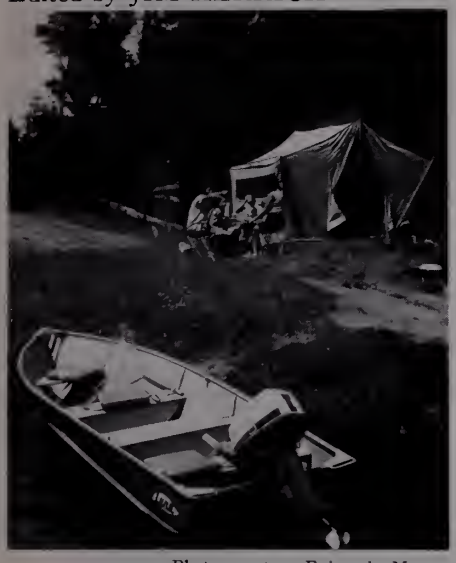


Photo courtesy Evinrude Motors

Camping by boat is similar to on-the-ground camping, except it can take you to entirely new areas unreachable by car and where nobody will bother you.

Boat Camping— Something New to Do

The great awakening is here.

All of a sudden, everyone wants to do something outdoors. Some cavort to the mountain lodge to get away, many pack a knapsack and tent and go camping, and still others hop aboard a boat and cruise into the sunset.

With a little imagination you can do all three. Combine a little island exploring with a tent and sleeping bag along with a boat and what you have is a new hobby: boat camping.

Boat camping isn't really new, but it's enjoying such a burgeoning growth among explorers, nature lovers and boatmen that it could almost be considered a new thing to do.

Even though more people are doing it, boat camping is still relatively unspoiled. Well-known campsites are getting very crowded lately since everyone rediscovered the beauty of America. When you go boat camping, however, you can find your own little place where nobody bothers you.

To go boat camping is not an expensive deal. For example, if you already own a tent and camping gear, just take it along next time you go boating. You'll find new, primitive areas where you can tie up, pitch camp and spend a night or two.

Another way to go camping is to buy one of the new breed of boats specifically designed to be a pleasure boat during the day and a camper at night.

These have lounge seats which convert into bunks and many have a head, stove and icebox built in.

These craft usually feature a canvas top and side curtains covering the entire boat from bow to stern. The canvas comes equipped with screened windows and is suspended on special supports so there is plenty of headroom.

You don't have to worry about all the protection during a bright sunny day since it all stows neatly and compactly into a storage locker or under a seat.

Camping in a boat is similar to on-the-ground camping, except it will take you to entirely new areas heretofore unreachable by car.

Common sense will never ruin an excursion into the unknown; it will only insure that you enjoy every minute of it. It is a good idea to make a complete list of everything you need to take with you. Leave the kitchen sink home, but take everything you know you're going to be unable to do without.

The obvious is usually forgotten. Whenever going into new areas, bring a compass and a good navigational chart of the waters along which you will be camping. Above all, make sure you know how to read both.

When you read a chart of the inland waters, lakes and rivers, remember the water depth is liable to be lower in the summer than it will be in the spring or late fall.

Learn to read the shoreline itself. The proper way to approach an unfamiliar bank is at slow speed and directly perpendicular to the shoreline. Have someone in the bow with a boat hook or paddle who can measure the depth of the water as you approach, and who stands ready to fend off that hidden stump.

If you are on a tidal estuary, or in salt water, the approach is the same, but also look for high-water marks on the bank and tie up accordingly. There's nothing more frustrating than to bunk down for the night planning to roll out at dawn and go fishing, only to discover the water is 150 yards away, and you're high and dry.

More than likely most places are open to camping, but it is a good idea to check out an area thoroughly and, if necessary, ask permission to use the land. More and more land is in private hands, but there still is much good camping ground around.

You will find that even if you have to use one of the public campsites, your boat will be able to take you where no car or camper can go.

One little but very important item worth noting is to tell someone where you're going and when you expect to be back. If you're overdue, people will know where to look.

Many marinas and launch sites will catalog this information on a "float plan" which will give anyone looking for you a specific area in which to search.

So, go boat camping and enjoy yourself. But remember, anytime you go out into the wilderness, be safe, sane, don't litter, and help keep what we have left for those who will come after.

That's only common camping courtesy.

CAMPGROUNDS AND BIRD SOUNDS

By HEWLETTE S. CRAWFORD
ROBERT G. HOOPER
RICHARD F. HARLOW

Southeastern Forest Experiment Station, USDA

AN evening breeze creeps into the campground as the sun drops toward the mountaintops. Sleeping bags have been unrolled in the hurriedly pitched tent. Dinner simmers on the camp stove and the lantern hangs under the table shelter ready to be lit. A small campfire crackles, spicing the evening air. It is time to sit and relax a few minutes and observe your handiwork at camp construction. Birds sing more actively in the surrounding forest as the shadows lengthen. The campground has few other occupants—it was a good idea to camp early in the season. You remember the crowds of campers from previous summers at this campground. But you don't remember as much bird activity later in the season.

There wasn't. Most birds nest from early May to mid-July, with the males singing frequently to outline their territory. Some migrants may be observed before early May, but usually a territorial pattern cannot be detected. After mid-July most birds become relatively inactive. If you vacation from May to mid-July, you can observe birds during their peak activity period.

If you are the average camper, you probably recognize the bold catbird that hops across your campsite, and you may recognize a robin's song in the distance, but what are all those other birds? It seems impossible to recognize so many different birds. But it really isn't as difficult as it may first seem.

In the Southern Appalachian Mountains, extending from north Georgia and Alabama through western North Carolina and Virginia to east Tennessee and West Virginia, some 50 species of birds share forest campgrounds and picnic areas with vacationers. Densities of over 4 breeding pairs per acre have been recorded in some campgrounds. Certain species of birds, however, are more abundant in some campgrounds, and all 50 species won't be found in any one area. If you know which birds to expect, and learn to recognize the more common species in a particular campground or picnic area, you have taken an important step toward knowing the birds. The other steps will seem easier in comparison.

A campground located where tree species and tree arrangement differ from those in another campground is likely to have different characteristic birds and is said to be in a different "forest community." A forest community is a group of plants and animals commonly found together. It is unnecessary to identify all the trees in order to distinguish the important forest communities. Forest recreation areas in the Southern Appalachians can be placed in one of 5 forest communities:

(1) conifers—trees with evergreen needles,

(2) deciduous hardwoods—trees with broad leaves that are shed over winter,

(3) conifer-hardwood—a mixture of the two,

(4) cove-hardwoods—pocket-like valleys occupied by deciduous hardwood trees and scattered conifers,

(5) park-like—open woods with a grassy floor.

Bird populations are not determined wholly by the dominant trees of the forest community. Many other factors within the community are important. Density of shrubs determines to a large degree how many birds will be breeding within an area. Shrubs provide nesting areas for many species. Insects, a major food of forest birds, feed upon the shrubs and in turn are eaten by the birds. The variety of bird species seems to be affected by the mixture of conifers and hardwoods—the greater the mixture, the greater the variety of species.

More than one forest community may be found in a recreation area. For example, cove-hardwoods may occur along a stream and a hardwood community may be on the drier hillsides above the cove. Recreation areas with a variety of communities offer more challenge for observing a variety of birds.

This is not intended to be a bird description guide; it is a guide to help the visitor in a recreation area look for birds. We recommend that interested bird observers obtain a reliable field guide to the birds from a bookstore and take it on camping trips. Records of bird calls may also be helpful. Birds commonly found in campgrounds are shown on the cover of this edition. Descriptions of the communities and their important bird species are as follows:

CONIFER

Pines or hemlocks make up at least 80% of the overstory trees in conifer communities. Most conifer stands have a dense overstory which causes an open understory. This condition may be pleasing to the eye but it is not satisfactory for high densities of breeding birds. Shrub cover is sparse in the understory and little variety exists in the canopy. On the average, a typical five acre campground would contain only 7 to 8 breeding pairs of birds.

Look for Acadian flycatchers, Carolina chickadees, and chipping sparrows low in the trees. Red-eyed vireos will generally be singing near the treetops. Louisiana waterthrushes may be found along streams. The rarer cerulean and parula warblers may occasionally be heard in the trees. Uncommon residents in this community are the eastern wood pewee, blue jay, tufted titmouse, Carolina wren, catbird, brown thrasher, yellow-throated vireo, Blackburnian warbler, yellow-throated warbler, pine warbler, ovenbird (see front cover), scarlet tanager, cardinal, indigo bunting, and rufous-sided towhee.

Good examples of the conifer community can be found in Rocky Bluff campground on the Pisgah National Forest in North Carolina and in the Hone Quarry picnic and campgrounds on the George Washington National Forest in Virginia.

(Continued on page 24)

(Continued from page 23)

DECIDUOUS HARDWOODS

The hardwood community is generally made up of a variety of oaks, hickories, and yellow-poplar with occasional scattered pines. This community is common in most parts of the Southern Appalachians.

The number of birds found in the hardwood community is usually low, approximately 9 breeding pairs of birds to 5 acres. Where understory shrubs are common, however, the number of pairs may average as high as 13 to 14 on every five acres.

Common bird residents of this community are wood pewees, catbirds, wood thrushes, red-eyed vireos, and chipping sparrows. The catbird and chipping sparrow often share your picnic table or campsite. Pewees are not quite as friendly but are commonly found singing low in the trees and are easy to locate by their persistent call. The melodious call of the wood thrush will indicate he is nearby although difficult to approach closely. The least flycatcher, an uncommon bird for the region, may occasionally be found in this community. Other occasional residents of this community are the yellow-shafted flicker, Acadian flycatcher, blue jay, Carolina chickadee, tufted titmouse, brown thrasher, robin, black and white warbler, ovenbird, American redstart, scarlet tanager, cardinal, parula warbler, yellow warbler, indigo bunting, and rufous-sided towhee.

Many campgrounds contain examples of the hardwood community. Lake Blue Ridge campground on the Chattahoochee National Forest in Georgia and White Rocks campground on the Jefferson National Forest in Virginia have extensive areas of the hardwood type.

CONIFER-HARDWOOD

A conifer-hardwood community is a mixed stand of trees where neither type makes up less than 10% nor more than 75% of the overstory trees. Oaks are the most common hardwoods, but hickories and yellow-poplar also occur. Several pines make up the conifer component; hemlock is usually minor or absent. The overstory mixture creates good bird habitat which—

depending on understory density—ranges from 9 to 22 breeding pairs in each five acres.

Catbirds, ovenbirds, and red-eyed vireos are abundant. Ovenbirds, singing from concealing cover near the ground, are easy to hear but difficult to see. Brown thrashers are common and almost as bold as the catbird. Other common species are the Acadian flycatcher, wood thrush, Louisiana water thrush, cardinal, Carolina chickadee, yellow-throated warbler, pine warbler, and redstart. All but the wood thrush reach their highest abundance in this community. These are only the most abundant species; many other species will be found in mixed stands.

Sherando Lake campground on the George Washington National Forest in Virginia, Hanging Dog Creek campground on the Nantahala National Forest in North Carolina, Indian Boundary campground on the Cherokee National Forest in Tennessee, and others contain examples of the conifer-hardwood type.

COVE-HARDWOODS

Cove-hardwood communities usually occur in stream bottoms and in mountain coves. These communities are similar to conifer-hardwood communities in that both conifers and hardwoods frequently occur. However, cove hardwoods have fewer oaks and a more varied mixture of other hardwoods. Yellow-poplar, birch, cucumber tree, Fraser magnolia, basswood, and others are common. The major conifers are usually hemlock and white pine. Both conifers and hardwoods are usually tall, straight, rapidly growing trees which may reach a height of over 100 feet in mature communities.

The number of breeding pairs of birds for each 5 acres ranges from 9 to 22, the same as in conifer-hardwood communities. The number is affected by the density of understory vegetation as well as the canopy mixture. Wood thrushes, catbirds, robins, and red-eyed vireos are abundant. The wood thrush is more abundant in cove hardwoods than in the other communities.

The least flycatcher, an uncommon species this far south, commonly nests in this community. They generally perch low in the trees, often near watercourses, and may be seen darting after insects. Other species commonly observed include the Acadian flycatcher, solitary vireo, oven-

 (Continued from page 25)

bird, towhee, black-throated blue warbler, parula warbler, and wood pewee. Many other bird species are found occasionally.

Rock Creek campground on the Cherokee National Forest in Tennessee and Hurricane Branch campground on the Jefferson National Forest in Virginia contain examples of the cove hardwood community. Look for the least flycatcher sitting on lower limbs of hemlocks near streams. Acadian flycatchers use the same general habitat. Parula warblers often share the treetops with red-eyed vireos.

PARK-LIKE

The dominant feature of this community is that at least one-fourth of the area is grass. The community can occur with conifer, hardwood, or mixed overstory cover. Picnic areas and campgrounds constructed around an opening fall in this category.

Catbirds, robins, and chipping sparrows are abundant in these open areas. Red-eyed vireos, cardinals, indigo buntings, towhees, and song sparrows are common, as are Acadian flycatchers and least flycatchers.

The number of breeding pairs of birds averages 11 in 5 acres, and places this community in an intermediate position in ability to support bird populations. Raccoon Branch campground on the Jefferson National Forest in Virginia and Black Mountain campground on the Pisgah National Forest in North Carolina are two examples of park-like communities.

WIDE RANGING BIRDS

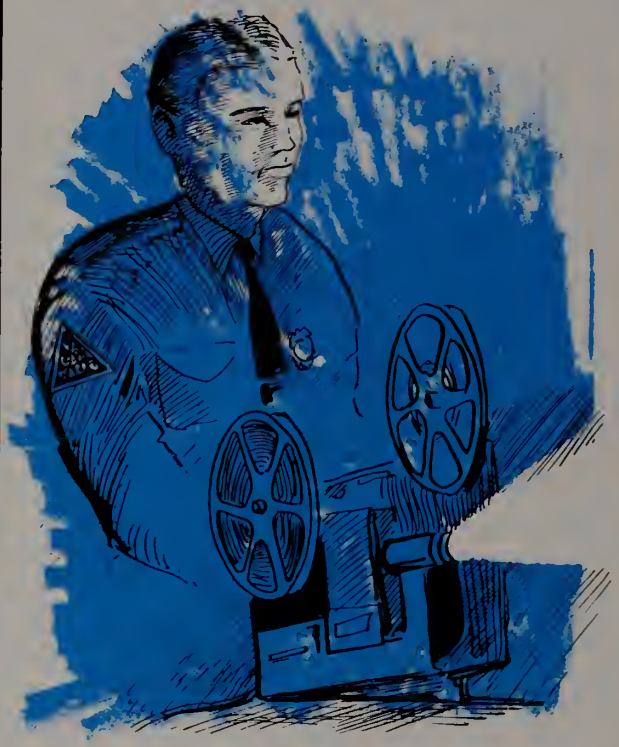
Not all species of birds have limited territories. Some range widely and may be found in several plant communities.

Pileated woodpeckers, the largest of the common woodpeckers, can be seen, or are more often heard hammering loudly on dead trees in different communities. Hawks are often seen soaring over wide areas or darting quickly from their woodland perch. Night birds, such as barred owls, great horned owls, screech owls, and whippoorwills, are often heard in many campgrounds. Turkeys and grouse may be seen with their broods along narrow woodland roads in the late spring and early summer.

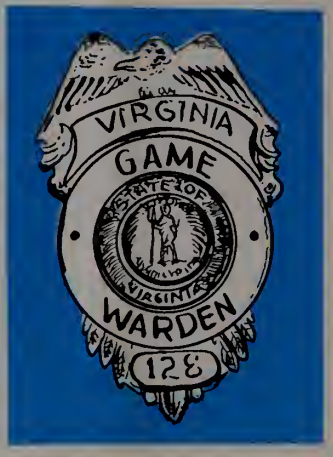
Birds play an important part in an enjoyable recreation experience. Learn their habits and calls in addition to recognizing them on sight. It will help you gain a deeper understanding of nature and add to your pleasure while visiting woodland recreation sites.

WOOD PEWEE
TOWHEE
CHIPPING SPARROW
CATBIRD
PILEATED WOODPECKER
BROWN THRASHER

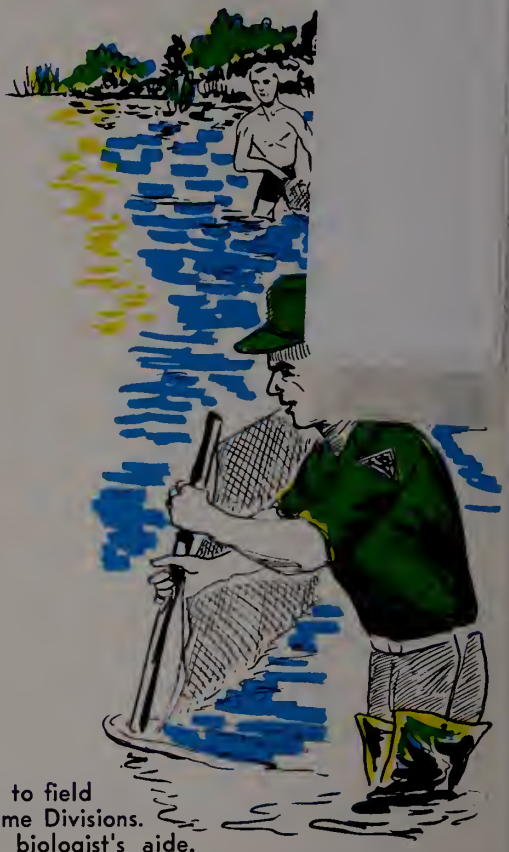
All in a Day's Work



Many evenings are spent in providing programs to sportsmen's clubs or youth groups. The warden is a public relations man.

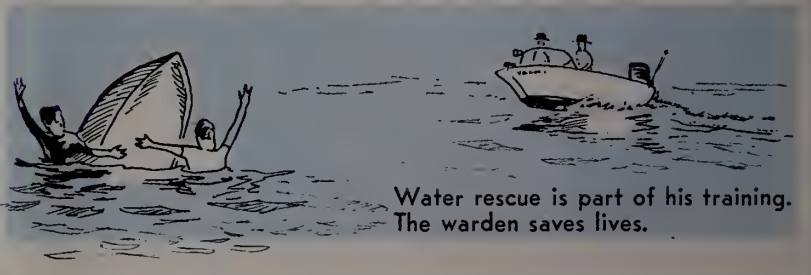


Behind this badge of a Virginia game warden is a man with many qualities—many jobs. These are but a few that are all in a day's work.

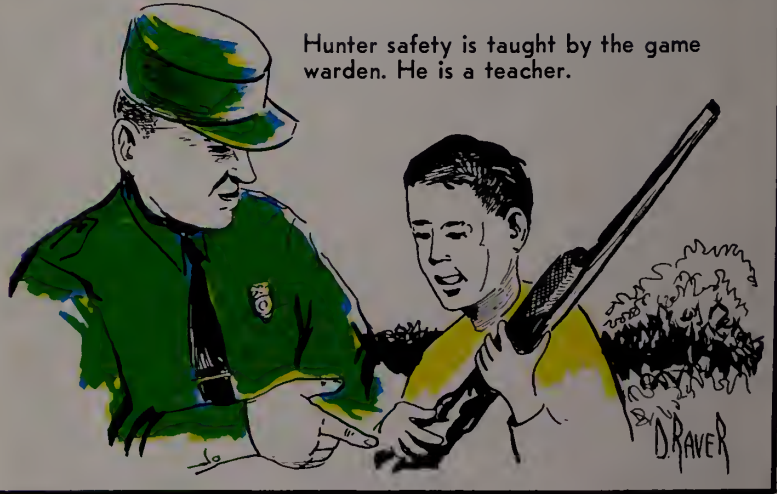


Assistance is often given to field men of the Fish and Game Divisions. The game warden is a biologist's aide.

The game warden enforces your fish and game laws. He is a policeman.



Water rescue is part of his training. The warden saves lives.



Hunter safety is taught by the game warden. He is a teacher.

REPORT VIOLATIONS!
HELP THE WARDEN HELP YOU.